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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/951,201	10/14/97	WOODARD	W 33470US

IM22/1118
RICHMOND HITCHCOCK FISH AND DOLLAR
P O BOX 2443
BARTLESVILLE OK 74005

EXAMINER	
DOROSHENK, A	
ART UNIT	PAPER NUMBER

1764

DATE MAILED: 11/18/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
08/951,201

Applicant(s)
Woodard et al

Examiner
Alexa Doroshenk

Group Art Unit
1764



☒ Responsive to communication(s) filed on Sep 7, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-6 and 12-21 is/are pending in the application

Of the above, claim(s) 12-21 is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-6 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims 1-6 and 12-21 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Oct 14, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Election/Restriction

1. Newly submitted claims 12-21 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The newly submitted claims are directed towards a process of producing olefins and can be practiced by another materially different apparatus or by hand and therefor require a different search than the originally presented claims, directed to an apparatus.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 12-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

2. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect can be deferred until the application is allowed by the examiner.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to what structural limitation applicant attempting to recite by "second inlet line for olefin reactant operably connected into said first inlet line for olefin reactant". There is no clear antecedent basis for this limitation in the disclosure rendering this claim indefinite. Since the claim is unclear, having two olefin inlet lines connected could result in a single olefin inlet line, the examiner has determined this claim as having two separate inlet lines for examination purposes.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harandi et al (4,788,366).

With respect to claim 1, Harandi et al disclose an apparatus comprising:

a reactor (col. 3, lines 48-51 and reference number 20);

an inlet line into reactor (col. 3, lines 48-51 and reference number 11);
effluent line from reactor (col. 3, lines 53-61 and reference number 22); and
separator (col. 4, lines 38-41 and reference number 26).

Harandi et al teaches wherein a second inlet line from a source of catalyst into said reactor provides fresh catalyst for the reactor (col. 6, lines 55-56 and col. 7, lines 51-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate this teaching into the reactor vessel (20) as a means for providing fresh catalyst for a more efficient reaction. It would have also been obvious to one of ordinary skill in the art at the time the invention was made to use the effluent line as a means to withdraw used catalyst in order to allow space for the catalyst being added to the system.

With respect to claim 2, Harandi et al disclose the use of filters (col. 7, lines 64-66) in the separator means. Since the effluent line is connected to the separator means, the filters are operably connected into said effluent line.

With respect to claim 4, Harandi et al disclose a reactor inlet from a second source (col. 3, lines 51-52 and reference number 21).

With respect to claim 5, Harandi et al disclose the effluent line (22) as operably connected to an inlet source of feedstock or recycle (21) wherein the feedstock or recycle could contain heavies (col. 3, lines 41-52).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harandi et al in view of Lashier et al (5,689,028).

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The modified apparatus of Harandi et al disclose all of the claimed structure except for an inlet for catalyst system deactivator. Lashier et al disclose a process to regulate olefin production in which a catalyst comprising a chromium source, a pyrrole-containing compound and a metal alkyl (col. 1, lines 55-59) is deactivated in the reactor effluent stream (col. 5, line 65- col. 6, line 21). Lashier et al disclose that the reaction products can be prepared from a conventional gas phase catalyst system (col. 4, line 65- col. 5, line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include an inlet for catalyst deactivator into the effluent stream of Harandi et al's modified gas phase catalyst system in order to regulate the production of olefin during trimerization once it has left the reactor.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harandi et al in view of Mehra et al (5,521,264).

The modified apparatus of Harandi et al disclose all of the claimed apparatus, including heavies removal, but is silent as to a reactor inlet line for solvent. Mehra et al disclose an apparatus similar to that of Harandi et al including a separator, a reactor, filters, and a solvent inlet line (col. 13, lines 61-65 and reference number 98). Mehra et al teaches the use of a solvent to absorb ethylene, higher alpha olefin comonomers, and heavier hydrocarbons (col. 13, lines 61-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a solvent inlet in optimal operable connection in the modified apparatus of Harandi et al to incorporate the teaching of Mehra et al and further remove heavies during operation.

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Response to Arguments

9. Applicant's arguments filed September 7, 1999 in paper number 10 have been fully considered but they are not persuasive.

35 USC 112

The examiner respectfully withdraws the 35 USC 112 rejections due to applicants' amendments of paper no. 10.

Art Rejections

Applicant's arguments with respect to claims 1, 3, and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Alexa Doroshenk, whose telephone number is (703) 305-0074. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode, can be reached on (703) 308-4311.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

AAD

November 17, 1999

Marian C. Knode
MARIAN C. KNODE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700